

Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

30-015-44275

January 15, 2018

Cimarex Energy

**NM OIL CONSERVATION
ARTESIA DISTRICT**

MAR 23 2018

RECEIVED

Re:

CLIENT: Cimarex Energy
WELL: Parkway 17 State 006H
FIELD: Bone Spring

RIG: HP395
COUNTY: Eddy
API NO: 30-015-44275
JOB NO: 17MLD2639

17, 19S, 29E, Eddy NM
-32.65616 -104.10467

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Ethan Banks FS	Parkway 17 State 006H Original Hole	8377.00 Ft to 13287.00 Ft	December 24, 2017 to January 4, 2018	SlimPulse Third Party Corrected

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Field Service Manager

Schlumberger Drilling and Measurements

Geo Market Area: South West Texas Basin

7220 W I-H 20

Midland, Texas 79706

Phone: (432) 742-5400 (Main)

Fax: (432) 742-5606 (Shared)

Well Reference:

17, 19S, 29E, Eddy NM

-32.65616 -104.10467

I, Ethan Banks certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of December 24, 2017 through January 04, 2018, conduct or supervise the taking of the SlimPulse surveys from a depth of 8377.00 Ft.00 feet to a depth of 13287.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of Cimarex Energy for the Parkway 17 State 006H Well (Original Hole) API No. 30-015-44275 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

Ethan Banks

By

Ethan Banks

FS

Subscribed and Sworn to before me this 16th day of January (month) 2018 (yr)

My Commission expires:

12-20-2020

J. Allemant

Notary Public

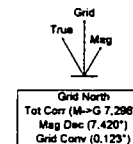
Adams County Colorado
(County State)

signature JENNIFER ALLEMAND
Notary Public
State of Colorado
Notary ID # 20164047962
My Commission Expires 12-20-2020

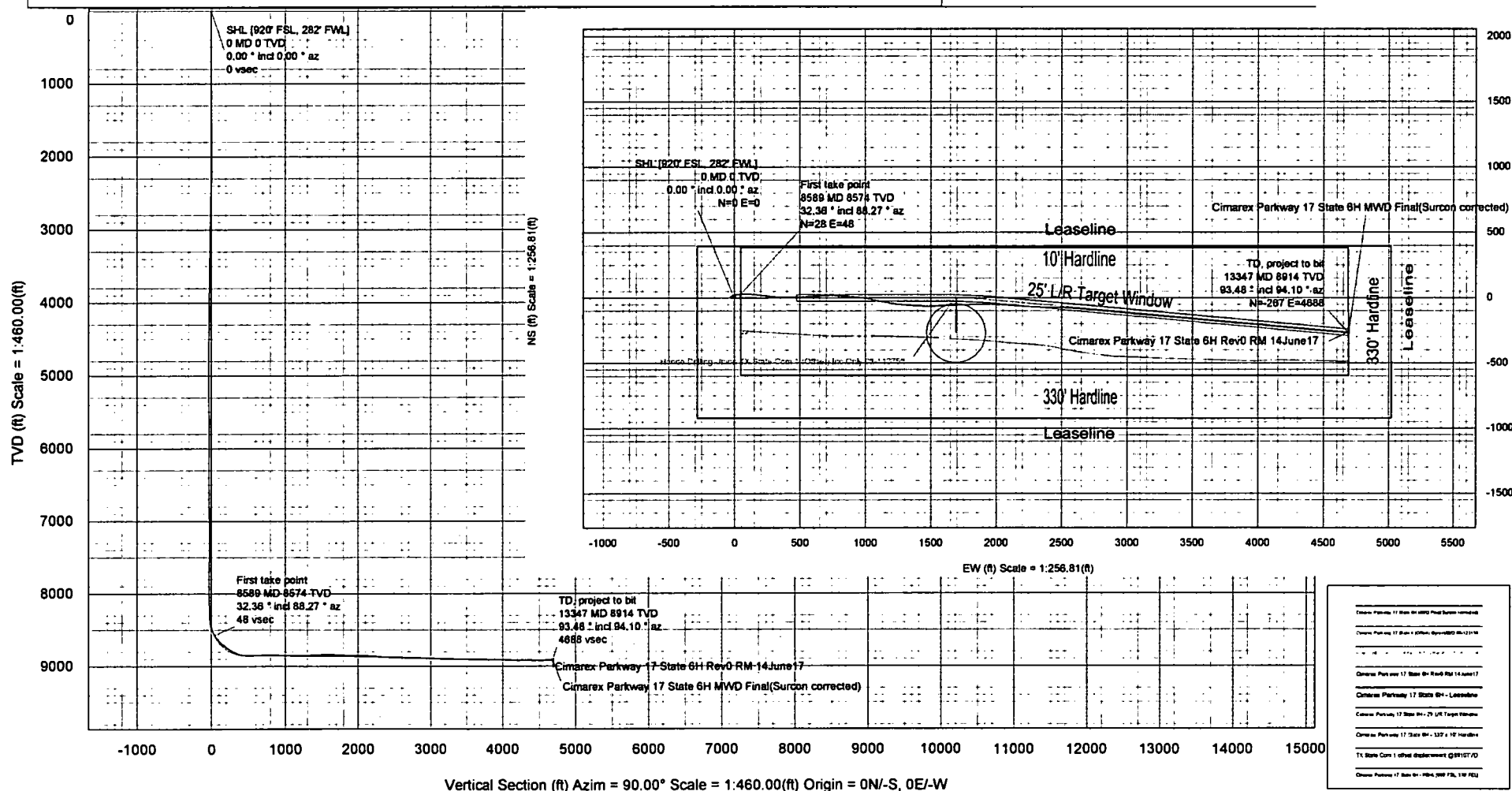
Borehole:	Original Borehole	Well:	Cimarex Parkway 17 State 6H	Field:	NM Eddy County (NAD 83)	Structure:	Cimarex Parkway 17 State 6H
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Gravity & Magnetic Parameters	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Miscellaneous
Model: HDGM 2017	Lat: N 32 39 22.18	Northings: 802518.468US	Cimarex Parkway
MagDec: 7.43°	Lon: W 104 0 16.81	Eastings: 811710.918US	Slot: 17 State 6H
Dip: 66.47°		Grid Conv: 0.1234°	Plan: Cimarex Parkway 17 State 6H MWD Final(Surcon corrected)
FS: 48139.38mT		Scale Fact: 0.99991478	TVD Ref: RKB(3393.1R above MSL)
Date: 11-Dec-2017			
Gravity FS: 998.012mgals (9.80665 Basic)			

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	OLS
SHL (920' FSL, 282' FWL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
First take point	8588.50	32.36	88.27	8574.38	47.97	27.78	47.97	13.71
TD, project to bit	13347.00	93.48	94.10	8914.44	4687.90	-266.53	4687.90	0.00



CONTROLLED	
Print ref	Cimarex Parkway 17 State 6H MWD Final(Surcon corrected)
Drawing ref	
Copy number	of 1
Date	09-Jan-2018
1. Check	
2. Check	
3. Check	
4. Check	
Copy number	for



Cimarex Parkway 17 State 6H MWD Final(Surcon corrected) Survey

Geodetic Report

(Def Survey)



Report Date: January 09, 2018 - 01:57 PM
 Client: Cimarex
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Cimarex Parkway 17 State 6H / Cimarex Parkway 17 State 6H
 Well: Cimarex Parkway 17 State 6H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Cimarex Parkway 17 State 6H MWD Final(Surcon corrected)
 Survey Date: December 11, 2017
 Tort / AHD / DDI / ERD Ratio: 247.871 * / 4880.177 ft / 0.256 / 0.545
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 39' 22.18287", W 104° 6' 16.81354"
 Location Grid N/E Y/X: N 602518.480 RUS, E 611710.910 RUS
 CRS Grid Convergence Angle: 0.1234 *
 Grid Scale Factor: 0.99991476
 Version / Patch: 2.10.696.0
 Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 90.000 * (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3393.100 ft above MSL
 Seabed / Ground Elevation: 3369.100 ft above MSL
 Magnetic Declination: 7.420 *
 Total Gravity Field Strength: 998.5118mgm (9.80685 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48139.380 nT
 Magnetic Dip Angle: 60.479 *
 Declination Date: December 11, 2017
 Magnetic Declination Model: HDGM 2017
 North Reference: Grid North
 Grid Convergence Used: 0.1234 *
 Total Corr Mag North->Grid North: 7.2964 *
 Local Coord Referenced To: Structure Reference Point

Comments	MD (m)	Incl (°)	Azim Grid (°)	TVD (m)	VSEC (m)	NS (m)	EW (m)	DLS (°/100m)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
SHL [920' FSL, 282' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	602518.48	611710.91	N 32 39 22.18	W 104 6 16.81
	178.00	0.37	73.39	178.00	0.55	0.18	0.55	0.21	602518.82	611711.48	N 32 39 22.18	W 104 6 16.81
	209.00	0.27	179.34	209.00	0.85	0.12	0.85	1.68	602518.58	611711.56	N 32 39 22.18	W 104 6 16.81
	246.00	0.26	279.74	246.00	0.57	0.05	0.57	1.10	602518.51	611711.48	N 32 39 22.18	W 104 6 16.81
	353.00	0.36	333.90	353.00	0.14	0.42	0.14	0.25	602518.88	611711.05	N 32 39 22.19	W 104 6 16.81
	489.00	0.59	333.74	489.99	-0.32	1.38	-0.32	0.18	602519.82	611710.59	N 32 39 22.20	W 104 6 16.82
	670.00	0.75	339.87	669.98	-1.14	3.31	-1.14	0.10	602521.77	611709.77	N 32 39 22.22	W 104 6 16.83
	851.00	1.02	29.59	850.98	-0.75	5.82	-0.75	0.43	602524.28	611710.16	N 32 39 22.24	W 104 6 16.82
	1037.00	1.08	30.20	1036.93	0.95	8.77	0.95	0.03	602527.23	611711.88	N 32 39 22.27	W 104 6 16.80
	1225.00	0.69	29.89	1224.91	2.40	11.29	2.40	0.21	602529.75	611713.31	N 32 39 22.29	W 104 6 16.79
	1319.00	0.90	38.87	1318.90	3.14	12.36	3.14	0.26	602530.82	611714.05	N 32 39 22.31	W 104 6 16.78
	1414.00	0.75	41.00	1413.89	4.02	13.41	4.02	0.16	602531.87	611714.93	N 32 39 22.32	W 104 6 16.77
	1602.00	0.33	48.29	1601.88	5.23	14.70	5.23	0.23	602533.16	611716.14	N 32 39 22.33	W 104 6 16.75
	1697.00	0.34	46.58	1696.88	5.84	15.07	5.84	0.01	602533.53	611716.55	N 32 39 22.33	W 104 6 16.75
	1791.00	0.52	45.90	1790.87	6.15	15.58	6.15	0.19	602534.02	611717.05	N 32 39 22.34	W 104 6 16.74
	1885.00	0.61	15.81	1884.87	6.59	16.34	6.59	0.33	602534.80	611717.50	N 32 39 22.34	W 104 6 16.74
	1980.00	0.63	41.10	1979.88	7.07	17.22	7.07	0.29	602535.68	611717.97	N 32 39 22.35	W 104 6 16.73
	2169.00	0.59	17.72	2168.85	8.04	18.93	8.04	0.13	602537.39	611718.95	N 32 39 22.37	W 104 6 16.72
	2357.00	1.98	262.76	2356.82	5.12	18.44	5.12	1.22	602537.90	611718.03	N 32 39 22.38	W 104 6 16.75
	2451.00	2.10	262.37	2450.76	1.80	19.01	1.80	0.13	602537.47	611712.71	N 32 39 22.37	W 104 6 16.79
	2548.00	1.98	257.84	2545.70	-1.51	18.44	-1.51	0.22	602538.90	611709.40	N 32 39 22.37	W 104 6 16.83
	2640.00	1.20	245.31	2639.68	-3.98	17.69	-3.98	0.88	602539.15	611706.93	N 32 39 22.36	W 104 6 16.86
	2829.00	1.20	232.63	2828.82	-7.35	15.68	-7.35	0.14	602534.12	611703.58	N 32 39 22.34	W 104 6 16.90
	2892.00	0.88	232.75	2891.61	-8.26	14.97	-8.26	0.51	602533.43	611702.65	N 32 39 22.33	W 104 6 16.91
	3008.00	1.04	224.29	3005.60	-9.88	13.70	-9.88	0.19	602532.16	611701.23	N 32 39 22.32	W 104 6 16.93
	3100.00	1.11	241.71	3099.58	-11.08	12.65	-11.08	0.35	602531.11	611698.31	N 32 39 22.30	W 104 6 16.96
	3195.00	1.09	232.07	3194.58	-12.80	11.86	-12.80	0.20	602530.12	611696.83	N 32 39 22.29	W 104 6 16.98
	3289.00	1.12	237.35	3288.54	-14.08	10.82	-14.08	0.11	602529.06	611695.09	N 32 39 22.28	W 104 6 17.00
	3384.00	1.25	247.98	3383.52	-15.82	9.73	-15.82	0.24	602527.58	611693.27	N 32 39 22.27	W 104 6 17.02
	3478.00	1.09	256.53	3477.50	-17.64	8.12	-17.64	0.19	602527.14	611691.68	N 32 39 22.27	W 104 6 17.04
	3573.00	0.91	253.18	3572.49	-19.23	6.88	-19.23	0.83	602527.25	611690.58	N 32 39 22.27	W 104 6 17.05
	3667.00	0.82	310.52	3666.48	-20.34	5.79	-20.34	0.42	602528.19	611689.57	N 32 39 22.26	W 104 6 17.06
	3761.00	1.01	312.06	3760.47	-21.34	4.68	-21.34	0.28	602528.16	611688.15	N 32 39 22.26	W 104 6 17.08
	3856.00	1.12	300.13	3855.48	-22.76	10.70	-22.76	1.35	602529.56	611687.46	N 32 39 22.29	W 104 6 17.09
	3949.00	0.14	122.78	3948.45	-23.45	11.10	-23.45	0.11	602529.38	611687.72	N 32 39 22.29	W 104 6 17.08
	4044.00	0.24	124.55	4043.45	-23.19	10.92	-23.19	0.67	602529.30	611687.55	N 32 39 22.29	W 104 6 17.09
	4138.00	0.41	274.59	4137.45	-23.38	10.84	-23.38	0.61	602527.80	611685.17	N 32 39 22.28	W 104 6 17.11
	4327.00	1.40	227.74	4326.43	-25.75	9.34	-25.75	0.29	602526.38	611683.28	N 32 39 22.26	W 104 6 17.14
	4421.00	1.49	237.82	4420.40	-27.63	7.92	-27.63	0.15	602525.13	611681.10	N 32 39 22.25	W 104 6 17.16
	4515.00	1.57	242.35	4514.38	-29.61	6.67	-29.61	0.11	602523.87	611678.88	N 32 39 22.24	W 104 6 17.19
	4609.00	1.55	238.64	4608.33	-32.03	5.41	-32.03	1.57	602523.13	611677.77	N 32 39 22.23	W 104 6 17.20
	4704.00	0.09	192.04	4703.32	-33.15	4.67	-33.15	0.13	602522.89	611677.69	N 32 39 22.23	W 104 6 17.20
	4798.00	0.21	199.18	4797.32	-33.22	4.43	-33.22	0.20	602522.56	611677.43	N 32 39 22.22	W 104 6 17.21
	4892.00	0.33	231.49	4891.31	-33.49	4.10	-33.49	0.73	602522.54	611677.47	N 32 39 22.22	W 104 6 17.20
	4986.00	0.36	60.09	4985.31	-33.44	4.08	-33.44	0.47	602522.95	611676.34	N 32 39 22.23	W 104 6 17.19
	5081.00	0.80	67.05	5080.31	-32.57	4.49	-32.57	0.39	602523.46	611676.25	N 32 39 22.23	W 104 6 17.18
	5175.00	0.48	50.28	5174.30	-31.67	5.00	-31.67	0.53	602524.27	611676.59	N 32 39 22.24	W 104 6 17.18
	5269.00	0.69	4.34	5268.30	-31.32	5.81	-31.32	1.60	602524.42	611680.42	N 32 39 22.23	W 104 6 17.17
	5363.00	1.09	118.03	5362.29	-30.49	5.96	-30.49	0.07	602522.95	611683.61	N 32 39 22.23	W 104 6 17.13
	5552.00	1.04	111.42	5551.28	-27.31	4.49	-27.31	0.50	602522.28	611684.81	N 32 39 22.22	W 104 6 17.12
	5646.00	0.68	131.07	5645.25	-26.10	3.82	-26.10	0.16	602520.80	611685.95	N 32 39 22.21	W 104 6 17.11
	5835.00	0.50	157.25	5834.24	-24.96	2.34	-24.96	0.43	602520.16	611685.96	N 32 39 22.20	W 104 6 17.11
	5929.00	0.37	209.49	5928.24	-24.95	1.70	-24.95	0.38	602519.86	611685.47	N 32 39 22.20	W 104 6 17.11
	6023.00	0.41	263.89	6022.24	-25.44	1.10	-25.44	0.79	602520.32	611684.48	N 32 39 22.20	W 104 6 17.12
	6118.00	0.99	307.51	6117.23	-26.43	1.88	-26.43	0.03	602522.36	611681.97	N 32 39 22.22	W 104 6 17.15
	6307.00	0.97	310.57	6306.20	-28.94	3.90	-28.94	0.31	602523.32	611681.00	N 32 39 22.23	W 104 6 17.16
	6401.00	0.71	320.07	6400.19	-29.82	4.86	-29.82	1.16	602523.87	611681.07	N 32 39 22.24	W 104 6 17.16
	6495.00	0.58	77.14	6494.19	-29.84	5.41	-29.84	0.65	602523.59	611681.83	N 32 39 22.23	W 104 6 17.15
	6590.00	0.59	141.77	6589.18	-29.09	5.13	-29.09	0.10	602522.77	611682.46	N 32 39 22.23	W 104 6 17.15
	6684.00	0.88	142.95	6683.18	-28.45	4.31	-28.45	0.73	602521.72	611683.88	N 32 39 22.22	W 104 6 17.13
	6778.00	1.30	124.57	6777.16	-27.24	3.26	-27.24	0.35	602520.60	611685.70	N 32 39 22.20	W 104 6 17.11
	6873.00	1.50	113.70	6872.14	-25.21	2.14	-25.21	0.67	602520.13	611687.98	N 32 39 22.20	W 104 6 17.08
	6967.00	1.38	88.94	6966.11	-22.95	1.87	-22.95	1.52	602519.10	611689.73	N 32 39 22.19	W 104 6 17.08
	7062.00	1.48	149.32	7061.08	-21.18	0.84	-21.18					

Comments	MD (m)	Incl (°)	Azim Grid (°)	TVD (m)	VSEC (m)	NS (m)	EW (m)	DLS C(100m)	Northing (mUS)	Easting (mUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	7156.00	2.73	179.80	7155.02	-20.56	-2.85	-20.56	1.74	602515.81	611690.38	N 32 39 22.16 W 104	6 17.05
	7250.00	0.87	206.94	7248.97	-20.88	-5.52	-20.88	2.13	602512.94	611690.06	N 32 39 22.13 W 104	6 17.06
	7345.00	0.71	344.93	7343.97	-21.34	-5.60	-21.34	1.55	602512.88	611689.58	N 32 39 22.13 W 104	6 17.06
	7439.00	1.05	333.77	7437.96	-21.87	-4.26	-21.87	0.40	602514.20	611689.04	N 32 39 22.14 W 104	6 17.07
	7533.00	1.30	336.10	7531.84	-22.68	-2.51	-22.68	0.27	602515.95	611688.23	N 32 39 22.16 W 104	6 17.08
	7628.00	2.58	302.50	7626.88	-24.92	-0.38	-24.92	1.75	602518.08	611685.99	N 32 39 22.18 W 104	6 17.11
	7722.00	1.23	278.68	7720.83	-27.70	0.91	-27.70	1.84	602519.37	611683.21	N 32 39 22.19 W 104	6 17.14
	7817.00	1.08	7.43	7815.82	-28.59	1.85	-28.59	1.70	602520.41	611682.32	N 32 39 22.20 W 104	6 17.15
	8005.00	1.24	43.60	8003.78	-26.96	5.18	-26.96	0.39	602523.64	611683.95	N 32 39 22.23 W 104	6 17.13
	8099.00	2.21	56.10	8097.74	-24.76	6.93	-24.76	1.10	602525.39	611688.16	N 32 39 22.25 W 104	6 17.10
	8194.00	2.70	42.48	8192.65	-21.73	9.60	-21.73	0.80	602528.08	611689.19	N 32 39 22.28 W 104	6 17.07
	8288.00	2.58	53.23	8286.55	-18.54	12.50	-18.54	0.54	602530.96	611692.38	N 32 39 22.31 W 104	6 17.03
	8308.00	2.64	37.55	8306.53	-17.90	13.14	-17.90	3.57	602531.59	611693.02	N 32 39 22.31 W 104	6 17.02
	8377.00	3.88	52.55	8375.42	-15.07	15.82	-15.07	2.17	602534.27	611695.84	N 32 39 22.34 W 104	6 16.99
	8408.00	7.47	65.35	8406.26	-12.41	17.29	-12.41	12.21	602535.75	611698.50	N 32 39 22.35 W 104	6 16.96
	8440.00	12.08	68.72	8437.79	-7.40	19.38	-7.40	14.45	602537.83	611703.51	N 32 39 22.37 W 104	6 16.90
	8471.00	16.80	73.31	8467.80	-0.09	21.84	-0.09	15.72	602540.30	611710.82	N 32 39 22.40 W 104	6 16.81
	8503.00	20.85	77.01	8498.09	9.90	24.45	9.90	13.19	602542.91	611720.81	N 32 39 22.42 W 104	6 16.70
	8534.00	25.22	83.65	8526.81	21.84	26.42	21.84	16.38	602544.88	611732.75	N 32 39 22.44 W 104	6 16.56
	8568.00	29.28	88.14	8555.08	36.45	27.43	36.45	14.21	602545.69	611747.38	N 32 39 22.45 W 104	6 16.39
First take point	8588.50	32.36	88.27	8574.39	47.97	27.79	47.97	13.71	602546.25	611758.89	N 32 39 22.46 W 104	6 16.25
	8597.00	33.53	88.31	8581.51	52.59	27.93	52.59	13.71	602546.39	611763.50	N 32 39 22.46 W 104	6 16.20
	8629.00	36.71	86.84	8607.68	70.88	26.72	70.88	10.28	602547.17	611781.88	N 32 39 22.47 W 104	6 15.98
	8660.00	40.18	86.04	8631.96	90.23	26.57	90.23	11.45	602548.03	611801.13	N 32 39 22.47 W 104	6 15.78
	8692.00	42.76	91.63	8655.94	111.41	26.61	111.41	10.98	602548.07	611822.31	N 32 39 22.47 W 104	6 15.51
	8723.00	45.76	96.03	8678.14	132.99	28.15	132.99	13.84	602548.60	611843.88	N 32 39 22.48 W 104	6 15.28
	8758.00	46.56	98.72	8699.90	156.30	25.54	156.30	8.89	602544.00	611867.20	N 32 39 22.43 W 104	6 14.98
	8786.00	51.39	97.18	8719.83	179.88	22.68	179.88	9.20	602541.12	611880.76	N 32 39 22.40 W 104	6 14.71
	8818.00	53.99	97.27	8739.23	206.11	19.48	206.11	8.13	602537.92	611916.00	N 32 39 22.37 W 104	6 14.41
	8849.00	55.71	96.32	8757.08	230.28	18.47	230.28	6.09	602534.92	611941.17	N 32 39 22.34 W 104	6 14.12
	8881.00	56.74	95.98	8774.67	256.73	13.62	256.73	3.35	602532.08	611967.61	N 32 39 22.31 W 104	6 13.81
	8912.00	58.54	95.74	8791.46	282.77	10.96	282.77	5.84	602529.41	611993.68	N 32 39 22.29 W 104	6 13.51
	8943.00	62.37	94.66	8806.74	309.63	8.51	309.63	12.72	602526.97	612020.51	N 32 39 22.26 W 104	6 13.19
	8975.00	66.61	92.65	8820.52	336.44	6.68	336.44	14.41	602525.14	612049.32	N 32 39 22.24 W 104	6 12.85
	9006.00	71.44	90.86	8831.61	367.38	5.80	367.38	16.49	602524.26	612078.24	N 32 39 22.23 W 104	6 12.52
	9037.00	76.63	89.48	8840.14	397.16	5.72	397.16	17.28	602524.18	612108.03	N 32 39 22.23 W 104	6 12.17
	9069.00	80.46	88.69	8846.49	426.51	6.25	426.51	12.28	602524.71	612139.38	N 32 39 22.24 W 104	6 11.80
	9100.00	83.66	88.64	8850.77	459.20	6.99	459.20	10.32	602525.45	612170.07	N 32 39 22.24 W 104	6 11.44
	9163.00	91.31	88.61	8853.54	522.07	8.50	522.07	12.14	602526.96	612232.94	N 32 39 22.26 W 104	6 10.71
	9198.00	92.03	87.22	8852.52	557.03	9.77	557.03	4.47	602528.23	612267.89	N 32 39 22.27 W 104	6 10.30
	9229.00	92.92	87.12	8851.18	587.97	11.30	587.97	2.89	602529.78	612298.82	N 32 39 22.28 W 104	6 9.94
	9261.00	92.68	87.20	8849.61	619.89	12.89	619.89	0.79	602531.35	612330.74	N 32 39 22.30 W 104	6 9.56
	9292.00	91.79	87.86	8848.41	650.84	14.22	650.84	3.57	602532.88	612361.69	N 32 39 22.33 W 104	6 9.10
	9386.00	90.69	89.72	8848.37	744.79	18.21	744.79	3.52	602534.66	612455.63	N 32 39 22.30 W 104	6 8.69
	9481.00	89.42	92.81	8848.28	839.75	14.11	839.75	3.74	602532.57	612550.59	N 32 39 22.30 W 104	6 8.20
	9575.00	88.73	96.26	8847.80	933.43	6.88	933.43	4.55	602525.14	612644.26	N 32 39 22.23 W 104	6 7.80
	9638.00	88.25	99.09	8849.48	995.84	-1.73	995.84	8.65	602516.73	612708.68	N 32 39 22.14 W 104	6 5.17
	9684.00	88.28	101.34	8850.25	1021.41	-6.34	1021.41	4.24	602512.12	612732.23	N 32 39 22.10 W 104	6 4.87
	9698.00	88.42	102.69	8851.17	1062.70	-13.00	1062.70	4.24	602505.46	612763.51	N 32 39 22.03 W 104	6 4.50
	9727.00	88.52	101.60	8852.00	1083.00	-19.49	1083.00	3.85	602498.87	612793.81	N 32 39 21.97 W 104	6 4.15
	9759.00	89.63	101.30	8852.74	1114.36	-25.81	1114.36	1.15	602482.85	612825.17	N 32 39 21.90 W 104	6 3.78
	9790.00	90.03	100.06	8853.04	1144.82	-31.56	1144.82	5.57	602486.90	612855.63	N 32 39 21.85 W 104	6 3.42
	9822.00	90.55	99.26	8852.88	1176.36	-38.93	1176.36	2.98	602481.53	612887.17	N 32 39 21.79 W 104	6 3.06
	9853.00	91.34	98.54	8852.37	1206.99	-41.72	1206.99	3.45	602476.74	612917.79	N 32 39 21.74 W 104	6 2.70
	9884.00	91.96	97.50	8851.50	1237.67	-48.06	1237.67	3.75	602472.42	612948.47	N 32 39 21.70 W 104	6 2.34
	9916.00	91.96	96.73	8850.44	1269.41	-50.01	1269.41	2.43	602468.46	612980.20	N 32 39 21.66 W 104	6 1.97
	9947.00	92.31	95.43	8849.28	1300.21	-53.29	1300.21	4.34	602465.17	613011.01	N 32 39 21.63 W 104	6 1.61
	9979.00	92.41	95.00	8847.97	1332.05	-56.20	1332.05	1.38	602462.27	613042.84	N 32 39 21.60 W 104	6 1.23
	10010.00	92.72	93.64	8846.58	1362.93	-58.53	1362.93	4.50	602458.94	613073.72	N 32 39 21.57 W 104	6 0.87
	10042.00	92.68	93.00	8845.07	1394.84	-60.38	1394.84	2.00	602458.09	613105.63	N 32 39 21.58 W 104	6 0.50
	10073.00	92.58	92.96	8843.65	1425.77	-61.99	1425.77	0.35	602456.48	613136.55	N 32 39 21.54 W 104	6 0.14
	10136.00	92.31	90.73	8840.96	1488.67	-64.02	1488.67	3.58	602454.45	613199.45	N 32 39 21.52 W 104	5 59.40
	10168.00	91.41	88.58	8839.92	1520.65	-63.82	1520.65	7.28	602454.64	613231.43	N 32 39 21.52 W 104	5 59.03
	10199.00	90.79	86.85	8839.33	1551.62	-62.59	1551.62	5.93	602455.88	613262.39	N 32 39 21.53 W 104	5 58.67
	10231.00	91.31	86.39	8838.74	1583.56	-60.70	1583.56	2.17	602457.76	613294.33	N 32 39 21.56 W 104	5 58.29
	10262.00	90.14	86.87	8836.35	1614.50	-58.88	1614.50	4.08	602459.59	613325.27	N 32 39 21.57 W 104	5 57.93
	10294.00	88.21	87.50	8838.81	1646.46	-57.31	1646.46	6.34	602461.16	613357.23	N 32 39 21.58 W 104	5 57.56
	10325.00	85.77	88.08	8840.44	1677.39	-56.11	1677.39	8.09	602462.35	613388.15	N 32 39 21.59 W 104	5 57.20
	10357.00	85.49	88.81	8842.87	1709.29	-55.25	1709.29	2.44	602463.22	613420.05	N 32 39 21.60 W 104	5 56.82
	10388.00	86.32	88.28	8845.09	1740.20	-54.46	1740.20	3.17	602464.00	613450.95	N 32 39 21.61 W 104	5 56.46
	10420.00	88.25	87.84	8846.60	1772.14	-53.32	1772.14	6.35	602465.14	613482.89	N 32 39 21.62 W 104	5 56.09
	10514.00	89.76	87.41	8848.24	1868.03	-49.27	1868.03	1.82	602469.20	613576.78	N 32 39 21.66 W 104	5 54.89
	10575.00	88.90	89.90	8848.95	1927.01	-47.83	1927.01	4.32	602470.63	613637.75	N 32 39 21.67 W 104	5 54.28
	10608.00	88.38	92.48	8849.73	1969.99	-48.52	1969.99	7.97	602469.94	613670.73	N 32 39 21.68 W 104	5 53.89
	10703.00	89.07	93.70	8851.85	2064.82	-53.84	2064.82	1.46	602468.84	613765.55	N 32 39 21.61 W 104	5 52.78
	10797.00	87.28	93.37	8854.84	2148.59	-59.43	2148.59	1.94	602459.03	613859.32	N 32 39 21.56 W 104	5 51.68
	10891.00	85.21	94.11	8861.00	2242.19	-65.55	2242.19	2.34	602452.92	613952.90	N 32 39 21.49 W 104	5 50.59
	10986.00	84.62	91.73	8869.42	2336.68	-70.37	2336.68	2.57	602448.10	614047.39	N 32 39 21.44 W 104	5 49.48
	11080.00	86.69	91.3									

Comments	MD (m)	Incl (°)	Azim Grid (°)	TVD (m)	VSEC (m)	NS (m)	EW (m)	DLB C/100m	Northing (mUS)	Easting (mUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
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Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7855 sigma
Survey Program:

Description	Part	MD From (m)	MD To (m)	EOU Freq (m)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	24.000	1/98.425	30.000	30.000	NAL_MWD_IFR1-Depth Only	Original Borehole / Cimarex Parkway 17 State 6H MWD Final(Surcon corrected)
	1	24.000	24.000	Act Strs	30.000	30.000	NAL_MWD_IFR1-Depth Only	Original Borehole / Cimarex Parkway 17 State 6H MWD Final(Surcon corrected)
	1	24.000	13347.000	Act Strs	30.000	30.000	NAL_MWD_IFR1	Original Borehole / Cimarex Parkway 17 State 6H MWD